ARTICLE 3. WASTEWATER TREATMENT FACILITIES; ISSUANCE OF PERMITS; CONSTRUCTION AND PERMIT REQUIREMENTS

RULE 1. GENERAL PROVISIONS

327 IAC 3-1-1 ------- General provisions: purpose

This article (327 IAC 3) prescribes definitions, policies, procedures, and technical criteria for the following programs: the issuance of permits for the construction of water pollution treatment/control facilities; agency approval of completed construction prior to use; the issuance of permits for the operation of water pollution treatment/control facilities; and miscellaneous administrative provisions.

327 IAC 3-1-2 ------- General provisions: definitions

In addition to the definitions contained in IC 13-11-2 and 327 IAC 1, the following definitions apply:

(1) "Clean Water Act" means the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., in effect on January 1, 1989, and amended on December 16, 1996*.

(2) "Combined sewer" means a wastewater collection sewer owned by the state or a municipality (as defined by Section 502(4) of the Clean Water Act*) which has been designed and constructed to convey sanitary wastewaters (domestic, commercial, or industrial wastewaters) and storm water through a single pipe system to a publicly owned treatment works (POTW) treatment plant.

(3) "Cyanide isolation facility" means any facility consisting of curbs, pits, drains, tanks, etc., that provides protection for cyanide solutions and compounds and prevents their release to waters of the state.

(4) "Discharge" or "direct discharge", when used without qualification, means a discharge of a pollutant.

(5) "Discharge of a pollutant" means any addition of any pollutant, or combination of pollutants, into any waters of the state of Indiana from a point source in Indiana. The term includes, without limitation, additions of pollutants into waters of the state from surface run-off which is collected or channeled by man and discharges through pipes, sewers, or other conveyances which lead either to no treatment works or to treatment works privately owned and operated by persons other than the discharger.

(6) "Dwelling" means any permanent structure which people inhabit on a regular or seasonal basis.

(7) "Effluent limitation" means any restriction established by the commissioner on quantities, discharge rates, and concentrations of pollutants that are discharged or will be discharged from point sources into waters of the state of Indiana.

(8) "Environmental Protection Agency" or "EPA" means the United States Environmental Protection Agency.

(9) "Experimental water pollution control equipment" means any equipment, device, unit, or structure that is installed on a temporary basis in order to determine the capability, capacity, or efficiency of a treatment technology.

(10) "House connection" means the pipe carrying the wastewater from a single-family dwelling to a common public sewer.

(11) "Industrial water treatment facility" means any equipment, device, unit, structure, or sewer that is used to treat water for use or reuse as industrial process water.

(12) "National pollutant discharge elimination system", also referred to as "NPDES", means the national program for issuing, modifying, revoking and reissuing, terminating, denying, monitoring, and enforcing permits for the discharge of pollutants from point sources and imposing and enforcing pretreatment requirements by the Environmental Protection Agency or the commissioner pursuant to Sections 307,

318, 402, and 405 of the CWA*.

(13) "Permit" means any written authorization, license, or equivalent document issued to regulate the discharge of pollutants, the construction of water pollution treatment/control facilities, or land application of sludge or waste products.

(14) "Point source" means any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, or vessel or other floating craft from which pollutants are or may be discharged. The term does not include return flows from irrigated agriculture.

(15) "Pollutant" means, but is not necessarily limited to, dredged spoil, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, solid wastes, toxic wastes, hazardous substances, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011, et seq.), heat, wrecked, or discarded equipment, rock, sand, cellar dirt, and other industrial, municipal, and agricultural waste discharged into water.

(16) "Publicly owned treatment works" (or "POTW") means a treatment works as defined by Section 212(2) of the CWA* which is owned by the state or a municipality (as defined by Section 502(4) of the CWA*), except that it does not include pipes, sewers, or other conveyances not connected to a facility providing treatment. The term includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or compatible industrial wastes. "POTW" also means the municipality, as defined by Section 502(4) of the CWA*, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

(17) "Sanitary sewer" means a sewer that conveys liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions, and to which storm, surface, and ground waters are not intentionally allowed to enter.

(18) "Sewer" means a pipe or conduit that carries wastewater or drainage water.

(19) "Sludge" means any solid, semisolid, or liquid waste generated from municipal, industrial, commercial, mining, or agricultural operations, water pollution treatment/control facilities, air pollution control facilities, or water supply treatment plants, exclusive of the treated effluent from a water pollution treatment facility.

(20) "Storm sewer" means a sewer which is designed to carry only storm water but excludes other liquid and water-carried wastes.

(21) "Storm water" means water resulting from rain, melting or melted snow, hail, or sleet.

(22) "Toxic pollutant" means any pollutant listed as toxic under Section 307(a)(1) of the CWA*.

(23) "Wastewater" means liquid or water-carried wastes from industrial, municipal, agricultural, or other sources.

(24) "Water pollution treatment/control facility" means any equipment, device, unit, or structure at a site that is used to control, prevent, pretreat, or treat any discharge or threatened discharge of pollutants into any waters of the state of Indiana including public or private sewerage systems.

*The Clean Water Act, 33 U.S.C.A. 1251 to 33 U.S.C.A. 1387, is available for copying at the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46204.

[As amended at: 22 IR 3080.]

RULE 2. STATE PERMITS FOR CONSTRUCTION

327 IAC 3-2-1 ------- State permits for construction: requirement of valid permit

No person shall cause or allow the construction, installation, or modification of any water pollution treatment/control facility or sanitary sewer, without a valid construction permit issued by the commissioner.

327 IAC 3-2-2 ------- State permits for construction: application and filing procedures

(a) Applications for permits to construct or modify a water pollution treatment/control facility or a sanitary sewer must be made in accordance with procedures established by the commissioner. The applications must be made on forms provided by the commissioner. Incomplete applications may result in the return of plans and specifications without action.

(b) The commissioner shall approve or deny a facility construction permit application within one hundred twenty (120) days of receipt by the commissioner.

(c) Failure by the commissioner to comply with subsection (b) is subject to IC 13-15-4-11.

(d) Construction shall not commence until all necessary state approvals and permits are obtained.

(e) The contents of a water pollution treatment/control facility construction permit application shall include at least the following:

(1) Application form signed by the applicant or its designated agent.

(2) One (1) set of construction plans and specifications capable of being microfilmed.

(3) Plans and specifications for municipal treatment/control facilities shall be prepared by or under the personal supervision of a professional engineer, registered pursuant to IC 25-31-1; plans and specifications shall be certified and sealed by said registered professional engineer. Registered land surveyors may submit plans and specifications for sanitary sewer extensions only as provided in IC 25-21.5-1-7.

(4) For other than sanitary sewer projects, an appropriate project design summary, on forms provided by the commissioner, specific to municipal or industrial facilities, containing the following information:

(A) Description of present facility, if any.

(B) Receiving stream or receiving wastewater treatment plant.

(C) Design data, including the design flows, design waste strengths, and anticipated effluent characteristics.

(D) Details on design of unit operations of proposed treatment facilities.

(E) Effluent limitation capability of proposed facility.

(5) Construction applications proposing the installation of a grinder pump or pumps to be used on low pressure sanitary sewer collection systems shall submit evidence of responsibility for ongoing maintenance.

(6) All applications for construction permits must include a signed and dated form as provided by the commissioner for the identification of affected persons as determined by IC 4-21.5-3-5(b). One (1) prepared mailing label for each potentially affected person shall be provided by the applicant for mailing notice of the permit when issued. Each mailing label shall include the name, address, and zip code of the potentially affected person and shall show on the topmost line of the label a mail code designated by the commissioner.

(7) The commissioner may request of an applicant any additional information deemed necessary to complete or correct deficiencies in the application.

[As amended at: 22 IR 3082.]

327 IAC 3-2-2.5 ----- State permits for construction: preventing conflict of interest

(a) An application, plan, or specification submitted for construction permit approval shall not be prepared or certified, partially or entirely, by the same person, firm, or organization that has permit review and issuance authority unless in accordance with subsection (b).

(b) An application, plan, or specification submitted for construction permit approval may be prepared or certified by noncontracted personnel of a unit if the following conditions are met:

(1) The unit has permit review and issuance authority.

(2) The unit owns and operates the receiving water pollution treatment/control facility where the wastewater from the proposed sanitary sewer project will be treated or controlled.

[As added at: 22 IR 3083.]

327 IAC 3-2-3 ------- State permits for construction: conditions of approval

(a) The permit may specify expiration dates by which the construction must be started and completed, which dates shall be compatible with any Federal and/or State grants or grant funds impacted. The commissioner may grant an extension of time for start and completion of construction if the commissioner believes such extension is necessary and justified.

(b) The commissioner shall have the authority to specify the limits and conditions necessary to insure proper design and ease of operation of water pollution treatment/control facilities.

(c) Sanitary sewers which have been issued construction permits shall be tested for infiltration/exfiltration in a method approved by the commissioner. All force mains shall be tested for leakage in an approved method. Results of the infiltration/ exfiltration test for sanitary sewers and leakage test for force mains shall be submitted for approval within ninety (90) days of completion of construction. Failure to submit test results within the allotted time period or failure to meet guidelines for infiltration/ inflow and leakage would be subject to enforcement proceedings as provided by 327 IAC 3-5-3.

(d) Sanitary sewers that are flexible in type and which are issued construction permits shall be tested for vertical deflection. The tests shall be conducted after the final backfill has been in place at least thirty (30) days. No flexible sewer shall exceed a vertical deflection of five percent (5%).

327 IAC 3-2-4 ------- State permits for construction: exclusions

A construction permit shall not be required under this article for the following:

(1) A storm sewer that transports only surface run-off.

(2) Construction of a house connection for a single-family dwelling or residence.

(3) Construction of a building connection for a multiunit residence building, commercial, manufacturing, or industrial building, provided that no toxic or other pollutants that are incompatible with the publicly-owned treatment works and collection system are present in the wastewater served by the sewer or that are incapable of being treated to an acceptable quality.

(4) All residential on-site wastewater disposal facilities subject to 410 IAC 6-8.1 governing the construction, installation, and modification of residential on-site wastewater disposal facilities.

(5) All commercial on-site wastewater disposal facilities subject to 410 IAC 6-10 governing the construction, installation, and modification of commercial on-site wastewater disposal facilities.

(6) Any animal confinement operation, whether or not it is a confined feeding operation.

(7) On-site storage lagoons at land application sites that are governed under 327 IAC 6.1.

(8) Ground water remediation systems utilizing either carbon absorption or air stripping as the mode of treatment.

(9) Wells for the disposal of salt or sulfur-bearing water and waste liquids if such disposal is pursuant to a valid permit issued by the following:

(A) The Indiana natural resources commission under IC 14-37 for Class II wells as described in 40 CFR 146.

(B) The United States Environmental Protection Agency for Class I, Class III, Class IV, and Class V wells as described in 40 CFR 146.

(10) Exclusion from the necessity of a construction permit does not relieve the municipality, sanitary district, commercial or manufacturing firm, or any person from satisfying the requirements of a municipal sewer ban pursuant to 327 IAC 4.

(11) Repair, replacement, modification, or addition of equipment for an existing water pollution treatment/control facility if the repair, replacement, modification, or addition is not proposed for treatment or control of any new influent pollutant or increased levels of any existing pollutant beyond the design treatment or control capability of the water pollution treatment/control facility.

(12) Repair, replacement, modification, or addition of equipment for an existing industrial water treatment facility or construction of a new industrial water treatment facility.

(13) Construction of experimental water pollution control equipment provided it treats a sidestream of wastewater from an existing water pollution treatment or control facility and the effluent from the experimental water pollution control equipment is returned to the existing water pollution treatment or control facility.

[As amended at: 22 IR 3083.]

327 IAC 3-2-5 ------- State permits for construction: non-site-specific permit

The commissioner may grant a non-site-specific construction permit for the following category of discharger: Short term drainage/sediment control lagoons.

(1) Said lagoons are those constructed according to approved general plans and specifications, however, the specific site location changes with time.

(2) Any request for issuance of such a non-site-specific, on-going construction permit shall be made by the applicant in conjunction with the application information presented in 327 IAC 3-2-2.

(3) It shall be the responsibility of the recipient of such a permit to notify the commissioner each time of a change in location of the permitted facility.

327 IAC 3-2-6 ------- State permits for construction: construction setback distances

(a) Setback distances for new wastewater treatment sites must comply with the following:

(1) No less than five hundred (500) feet shall separate a water pollution treatment/control facility, including aerated lagoon systems, from a dwelling, unless that dwelling is an office owned, occupied by, and located on the property of the owners of the water pollution treatment/control facility, as measured from the outside edge of the equipment involved with the treatment/control of water pollution to the outside edge of the dwelling.

(2) No less than one-fourth (1/4) of a mile shall separate a nonaerated facultative treatment lagoon from a dwelling, unless that dwelling is an office owned, occupied by, and located on the property of the owners of the nonaerated facultative treatment lagoon, as measured from the outside edge of the nonaerated facultative treatment lagoon to the outside edge of the dwelling.

(b) The separation distances required in subsection (a) may be modified if the affected dwelling owners agree to a shortened separation distance and record such agreement as easements and deed restrictions with the county recorder's office for the affected property.

[As added at: 22 IR 3084.]

RULE 2.1. PERMITTING AUTHORITY OF UNITS FOR SANITARY SEWER CONSTRUCTION

327 IAC 3-2.1-1 ----- Permitting authority of units for sanitary sewer construction: definitions

In addition to the applicable definitions contained in IC 13-11-2, the following definitions apply throughout this rule:

(1) "Professional engineer" means a person registered as a professional engineer by the Indiana state board of registration for professional engineers under IC 25-31.

(2) "Qualified engineer" means a person with a bachelor of science degree in engineering from an accredited college or university program or a professional engineer as defined in subdivision (1).

(3) "Sanitary sewer" means a sewer that conveys liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions and to which storm, surface, and ground waters are not intentionally allowed to enter.

(4) "Storm water" means water resulting from rain, melting or melted snow, hail, or sleet.

(5) "Unit" means county, municipality, or township as set forth in IC 36-1-2-23.

[As added at: 22 IR 3084.]

327 IAC 3-2.1-2 ----- Permitting authority of units for sanitary sewer construction: incorporation by reference

Bulletin SE 13, "On-Site Water Supply and Wastewater Disposal for Public and Commercial Establishments", Indiana State Board of Health, 1988, is incorporated by reference into this rule and may be obtained from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206.

[As added at: 22 IR 3084.]

327 IAC 3-2.1-3 ----- Permitting authority of units for sanitary sewer construction: permitting authority and responsibilities

(a) The plans for a sanitary sewer extension are not required to be submitted to any state agency for a permit, permission, or review, unless required by federal law, if the following are met:

(1) A person submits plans to a unit concerning the design or construction of a sanitary sewer.

(2) A professional engineer prepared the plans.

(3) The unit provided a review of the plans by a qualified engineer and subsequently approved the plans.

(4) All other requirements specified in this rule and all other rules adopted by the water pollution control board are met.

(b) The proposed construction of a sanitary sewer must be in accordance with the Clean Water Act*.

(c) The other requirements specified in rules that have been adopted by the water pollution control board and must be adhered to in the permitting of a sanitary sewer include, but are not limited to, the following:

(1) 327 IAC 1.

(2) 327 IAC 2.

(3) 327 IAC 4.

(4) 327 IAC 3-6.

(d) Units shall notify the commissioner that a sanitary sewer construction permit application has been received by submitting to the department, on the date received, the following information:

(1) Project name.

(2) Identification of the professional engineer and engineering firm, if applicable, who designed the project, plans, and specifications.

(3) The county of the construction project.

(4) The location of the construction project in terms of the following:

(A) Nearest public intersection.

(B) Quarter section, section, township, and range of the approximate center of the construction project.

(C) If the information requested by clause (B) is not available, the latitude and longitude of the approximate center of the construction project to the nearest fifteen (15) seconds.

(e) Units shall notify the commissioner of all sanitary sewer construction permits that the unit has issued by submitting to the department, on the effective date of the permit, a copy of each issued permit. Each submission shall contain the following information for each issued permit:

(1) Project name with project number and approval number, if different from the project number.

(2) Identification of the professional engineer and engineering firm, if applicable, who designed the project, plans, and specifications.

(3) The county of the construction project.

(4) The location of the construction project in terms of the following:

(A) Nearest public intersection.

(B) Quarter section, section, township, and range of the approximate center of the construction project.

(C) If the information requested by clause (B) is not available, the latitude and longitude of the approximate center of the construction project to the nearest fifteen (15) seconds.

(5) Date of issuance and effective date of the permit.

(6) Average flows in gallons per day allotted to the sanitary sewer project and determined using the values for flow allotment per connection type according to Bulletin SE 13, "On-Site Water Supply and Wastewater Disposal for Public and Commercial Establishments".

(7) Project description giving length and type of sewer.

(8) The number and type of sewer connections requested.

(9) Description of any lift stations included in the project.

(10) A project site map.

*The Clean Water Act in effect on January 1, 1989, and amended on December 16, 1996, may be found at 33 U.S.C. 1251 to 33 U.S.C. 1387 and is available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Indianapolis, Indiana 46206.

[As added at: 22 IR 3084.]

RULE 3. APPROVAL OF COMPLETED CONSTRUCTION

327 IAC 3-3-1 ------- Approval of completed construction: requirement to submit as-built plans

If the commissioner determines it is necessary to review the as-built plans for a project requiring a construction permit, the applicant shall submit those plans upon request. The commissioner shall approve or disapprove those plans not more than thirty (30) days after they have been submitted.

RULE 4. OPERATIONAL PERMITS; FACILITIES NOT COVERED BY OTHER PERMIT PROGRAMS

327 IAC 3-4-1 ------- Operational permits; facilities not covered by other permit programs: purpose

The purpose of this rule (327 IAC 3-4) is to define the applicability of permits for the operation of water pollution control facilities, to specify criteria for establishing terms and conditions of such permits, and to specify procedures for the issuance of such permits.

327 IAC 3-4-2 ------- Operational permits; facilities not covered by other permit programs: applicability

(a) Any person who owns or operates a water pollution treatment/control facility which is not subject to the NPDES permit program (327 IAC 5-1 through 327 IAC 5-10) or the industrial waste pretreatment permit program (327 IAC 515) may be required, at the commissioner's discretion, to obtain a permit to operate the water pollution control facility. Generally, such permits will be required only where the operation of the facility is considered by the commissioner to pose a significant threat to the environment.

(b) A permit is not required under this rule (327 IAC 3-4) for the discharge, by underground injection, of salt or sulfurbearing water and waste liquids associated with the recovery of oil and natural gas, if the discharge is pursuant to a valid permit issued under IC 13-4-7-12.

327 IAC 3-4-3 ------- Operational permits; facilities not covered by other permit programs: terms and conditions of operation permits

A permit issued under this rule (327 IAC 3-4) shall contain such terms and conditions as the commissioner determines necessary to assure that the water pollution control facility will be operated in such a manner that any pollutants released or threatened to be released by the facility into the environment will not cause or contribute to violations of applicable water quality standards, or otherwise cause a significant adverse impact on the environment or the public health.

327 IAC 3-4-4 ------- Operational permits; facilities not covered by other permit programs: procedures for issuance of operation permits

(a) Whenever the commissioner determines that a permit should be required under this rule (327 IAC 3-4) the commissioner shall notify the owner, or operator if different from the owner, in writing, of that determination and the reasons underlying it and shall include an application form with such notice. The owner or operator must complete the application and return it to the commissioner within sixty (60) days of such notice.

(b) 327 IAC 5-3-2, 327 IAC 5-3-3, 327 IAC 5-3-6, 327 IAC 5-3-7, 327 IAC 5-3-14, 327 IAC 5-3-15, and 327 IAC 53-16 shall apply to the issuance of an operation permit under this rule.

(c) Prior to issuance of a permit, the permit applicant and any interested person shall be supplied with a notice containing the information specified in 327 IAC 5-3-12(c) and a copy of the statement of basis and shall be allowed a 30-day period to comment on the draft

permit. Comments received by the commissioner during this period will be duly considered in his final determination on the issuance of the permit. For purposes of this section, a person may express his interest by specifically requesting the notice and statement of basis for a particular draft permit or by requesting to be placed on a mailing list for receipt of such information on all operation permits proposed for issuance.

RULE 5. MISCELLANEOUS ADMINISTRATIVE PROVISIONS

327 IAC 3-5-1 ------- Miscellaneous administrative provisions: duration of permits

Except as specifically provided for elsewhere in these rules (327 IAC 3-5), permits may be issued by the commissioner for any period of time not to exceed five (5) years.

327 IAC 3-5-2 ------- Miscellaneous administrative provisions: transferability

A permit issued under this article (327 IAC 3) may be transferred to another person by a permittee without modification or revocation and reissuance being required, if:

(1) The permittee notifies the commissioner of the proposed transfer.

(2) The transferee certifies in writing to the commissioner that he does not intend to significantly alter the permitted activity.

(3) A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations from that date on) is submitted to the commissioner.

(4) The commissioner within thirty (30) days does not notify the current permittee and the new permittee of his or her intent to modify, revoke and reissue, or terminate the permit and to require that a new permit be filed rather than agreeing to the transfer of the permit.

327 IAC 3-5-3 ------- Miscellaneous administrative provisions: enforcement

This article (327 IAC 3) shall be enforced through the provisions of IC 13-7-10-5, IC 13-7-11, or IC 13-7-12, or any combination thereof, as appropriate.

327 IAC 3-5-4 ------- Miscellaneous administrative provisions: penalties

Penalties for violation of this article (327 IAC 3) shall be governed by IC 13-7-13.

327 IAC 3-5-5 ------- Miscellaneous administrative provisions: fees

(a) The following governmental entities shall remit with each application made under this article a fee of fifty dollars ($50) but shall be excluded from payment of fee as described in subsection (b):

(1) County, municipality, or township, which is defined as a unit under IC 36-1-2-23.

(2) A nonprofit organization.

(3) A conservancy district.

(4) A school corporation that operates a sewage treatment facility.

(5) A regional water or sewage district.

(b) The following fee schedule has been established to defray administrative costs under IC 13-7-16-6.

TYPE	PROCESSING FEE
New wastewater treatment plant (except industrial):	
Up to 500,000 gallons per day	$1,250
Greater than 500,000 gallons per day	$2,500
New industrial wastewater treatment plant (including pretreatment):	
Up to 500,000 gallons per day for:	
Biological or chemical treatment	$1,250
Physical treatment	$ 250
Greater than 500,000 gallons per day for:	
Biological or chemical treatment	$2,500
Physical treatment	$ 500
WWTP expansion:	
Up to fifty percent (50%) design capacity:	
Greater than 500,000 gallons per day	$1,250
Up to 500,000 gallons per day	$ 625
Greater than fifty percent (50%) design capacity:	
Greater than 500,000 gallons per day	$2,500
Up to 500,000 gallons per day	$1,250

(c) A fee shall be remitted with each application made in accordance with the schedule in subsection (b). Checks shall be made payable to the department of environmental management.

(d) The fee shall not be refundable once staff review and processing of the permit application has commenced.

[As amended at: 20 IR 11.]

327 IAC 3-5-6 ------- Miscellaneous administrative provisions: agency requests for data

(a) Whenever necessary to carry out the provisions of this article (327 IAC 3), any person who is or may be reasonably expected to be subject to such regulatory provisions shall:

(1) establish and maintain records;

(2) make reports;

(3) install, use, and maintain monitoring equipment or method (including, where appropriate, biomonitoring methods);

(4) sample effluents, internal wastestreams where appropriate, or other material; and

(5) provide other data, including, but not limited to, raw materials, catalysts, intermediate products, by-products, production rates, and related process information;

at such locations, at such times, and in such a manner, as the commissioner may reasonably prescribe.

(b) Sampling of internal wastestreams under subdivision (a)(4) and the provision of data under subdivision (a)(5) shall not be required by the commissioner unless:

(1) such data is reasonably expected to facilitate the identification or quantification of pollutants which may be released to the environment from facilities owned or operated by the person to whom the request is made; and

(2) the identification or quantification of such pollutants could not reasonably be made by the commissioner in the absence of the requested information.

(c) The commissioner, or his authorized representative, upon presentation of proper credentials:

(1) Shall have a right of entry to, upon, or through any premises, public or private, in which records, reports, monitoring or treatment equipment or methods, samples, or other data required to be maintained or provided under subsection (a) are located.

(2) May at reasonable times have access to and copy any records, inspect any monitoring or treatment equipment or method, or sample any effluent, internal wastestream, or other material required under subsection (a).

For purposes of this subsection, the commissioner may authorize, as his representative, any fulltime employee of the department or any person under contract with the department whereby such person has agreed, in writing under oath, not to disclose any information collected in performance of his contact to any person except as specified by the contract.

RULE 6. TECHNICAL STANDARDS FOR SANITARY COLLECTION SYSTEMS

327 IAC 3-6-1 ------- Technical standards for sanitary collection systems: definitions

In addition to the definitions contained in IC 13-11-2 and 327 IAC 3-1, the following definitions apply throughout this rule:

(1) "Accessories" means the constituent elements of a sanitary collection system.

(2) "American National Standards" means the recommended standards certified by the American Water Works Association.

(3) "AWWA/ANS standards" means the American National Standard approved by the American Water Works Association.

(4) "Authorized representative" means a person as described by at least one (1) of the following:

(A) A principal executive officer or ranking elected official of a local governmental unit.

(B) The holder of a position of responsibility for the overall operation of the unit's water pollution treatment/control facility.

(C) A named individual for whom authorization has been submitted in writing to the commissioner by one (1) of the individuals of clause (A) or (B).

(5) "Collection system" means the composite network of gravity sewers, force mains, lift stations, and other accessories used to receive and to transport sewage to a water pollution treatment/control facility.

(6) "Downstream" means the direction of flow toward the water pollution treatment/control facility.

(7) "Force main" means a sanitary sewer that utilizes a mode of force to transport wastewater.

(8) "Gravity sewer" means a sanitary sewer that utilizes gravity to transport wastewater.

(9) "One hundred (100) year flood" means a flood with an occurrence probability of one percent (1%) each year as determined by the Indiana department of natural resources.

(10) "Surface water" means water, regardless of being publicly or privately owned, that meets the following conditions:

(A) The water is exposed to the atmosphere.

(B) The water wholly or partially:

(i) is within;

(ii) flows through; or

(iii) borders upon;

Indiana.

(11) "Twenty-five (25) year flood" means a flood with an occurrence probability of four percent (4%) each year as determined by the Indiana department of natural resources.

(12) "Upstream" means the direction of flow opposite to downstream.

[As added at: 22 IR 3085.]

327 IAC 3-6-2 ------- Technical standards for sanitary collection systems: incorporation by reference

The following materials, including titles and the names and addresses of where they may be located for inspection and copying, are incorporated by reference into this rule:

(1) The American Society for Testing and Materials standards listed throughout this rule are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206. Notwithstanding language to the contrary in the primarily incorporated documents, the version of all secondarily incorporated documents, which are those documents referred to in the primarily incorporated documents, shall be the version in effect on the date of final adoption of this rule.

(2) The American Water Works Association (AWWA) standards listed throughout this rule are available from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206. Notwithstanding language to the contrary in the primarily incorporated documents, the version of all secondarily incorporated documents, which are those documents referred to in the primarily incorporated documents, shall be the version in effect on the date of final adoption of this rule.

(3) The National Electrical Code standards listed in this rule can be found in the National Electrical Code, 1996 edition and are available from the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206.

(4) The National Electrical Manufacturers Association (NEMA) standards listed in this rule can be found in NEMA 250, 1997 edition and are available from the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1847, Rosslyn, Virginia 22209 or from the Indiana Department of Environmental Management, Office of Water Management, Indiana Government Center-North, 100 North Senate Avenue, Room 1255, Indianapolis, Indiana 46206.

[As added at: 22 IR 3086.]

327 IAC 3-6-3 ------- Technical standards for sanitary collection systems: applicability

The technical standards established in this rule are applicable to the design and construction of all new or modified sanitary collection systems subject to this article that are constructed in the state of Indiana and to the applications, plans, and specifications of the new or modified collection system.

[As added at: 22 IR 3086.]

327 IAC 3-6-4 ------- Technical standards for sanitary collection systems: certifications

(a) Certifications complying with the required statements as set forth in subsections (b) and (c) shall be submitted with an application, plan, or specification for construction permit approval under this rule.

(b) A professional engineer or a registered land surveyor, in conformance with IC 25-31-1 and 327 IAC 3-2.1-3(a), must sign, seal, and date the application making the following certification: "I certify under penalty of law that the design of this project will be performed under my direction or supervision to assure conformance with 327 IAC 3 and that the plans and specifications will require the construction of said project to be performed in conformance with 327 IAC 3-6. I certify that the peak daily flow rates, in accordance with 327 IAC 3-6-11 generated in the area that will be collected by the proposed collection system that is the subject of the application, plans, and specifications, will not cause overflowing or bypassing in the same subject proposed collection system from locations other than NPDES authorized discharge points. I certify that the proposed collection system does not include new combined sewers or a combined sewer extension to existing combined sewers. I certify that the ability for this collection system to comply with 327 IAC 3 is not contingent on water pollution treatment/control facility construction that has not been completed and put into operation. I certify that the design of the proposed project will meet all local rules, laws, regulations, and ordinances. The information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.".

(c) The authorized representative of the town, city, sanitary district, or any entity that has jurisdiction over the proposed collection system must sign and date the application and issue the following certification: "I certify that I have reviewed and understand the requirements of 327 IAC 3 and that the sanitary collection system proposed, with the submission of this application, plans, and specifications, meets all requirements of 327 IAC 3. I certify that the daily flow generated in the area that will be collected by the project system will not cause overflowing or bypassing in the collection system from locations other than NPDES authorized discharge points and that there is sufficient capacity in the receiving water pollution treatment/control facility to treat the additional daily flow and remain in compliance with applicable NPDES permit effluent limitations. I certify that the proposed average flow will not result in hydraulic or organic overload. I certify that the proposed collection system does not include new combined sewers or a combined sewer extension to existing combined sewers. I certify that the ability for this collection system to comply with 327 IAC 3 is not contingent on water pollution/control facility construction that has not been completed and put into operation. I certify that the project meets all local rules, laws, regulations, and ordinances. The information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.".

[As added at: 22 IR 3086.]

327 IAC 3-6-5 ------- Technical standards for sanitary collection systems: additional information on construction permit applications

(a) In addition to the information on the application for a construction permit required by 327 IAC 3-2-2(c), the following information shall be provided with each application for a collection system:

(1) A design summary signed, dated, and sealed by a professional engineer or a registered land surveyor in conformance with section 4 of this rule, on forms provided by the commissioner, completed with the following information:

(A) The proposed number of service connections to single-family homes, apartments, and commercial or industrial customers with the following details of design flow data:

(i) Design average daily flow.

(ii) Peaking factor.

(iii) Peak daily flow.

(B) Length, diameter, type, and construction material of sanitary sewer.

(C) Aggregate length of sanitary sewer.

(D) Type of sanitary sewer jointing.

(E) Location of connection of proposed sanitary sewer to existing collection system.

(F) Who shall be providing wastewater treatment or control.

(G) Who shall be providing inspection during construction.

(H) Who shall be legally responsible for providing maintenance after completion of construction.

(2) All certifications required by section 4 of this rule.

(b) The plans required to be submitted with an application for construction permit specified in 327 IAC 3-2-2(c)(2) must bear a dated signature and seal of a professional engineer or a professional land surveyor in accordance with section 4 of this rule and must include the following:

(1) The plan view of the project area including the following:

(A) Location of existing and proposed roads and lot boundaries.

(B) Location of existing and proposed sanitary sewer pipes indicating the diameters and material types of the sanitary sewer pipes.

(C) Location of existing and proposed lift stations, manholes, road casings, cleanout assemblies, and other accessories.

(D) Location of existing and proposed water mains, storm sewers, and culverts.

(E) Separation distances of sanitary sewers, manholes, and lift stations from water mains and drinking water wells.

(F) The elevation of the one hundred (100) year floodway and flood plain.

(G) The elevation of the twenty-five (25) year floodplain for collection systems that include lift stations.

(2) The profile view of all sanitary sewer paths including the following:

(A) Location of existing and proposed roads and lot boundaries.

(B) Location of existing and proposed sanitary sewer pipes indicating the diameters and material types of the sanitary sewer pipes.

(C) Location of existing and proposed lift stations, manholes, casings, cleanout assemblies, and other accessories.

(D) Location of existing and proposed water mains, storm sewers, and culverts.

(E) Slope, top of casing elevation, invert elevations, existing grade, proposed grade, distances between manholes, and vertical separation distances of sanitary sewers from water mains.

(3) The details of any lift stations, manholes, drop manholes, inverted siphons, air relief valves, water body crossing, or construction in a floodway.

(4) The details of the typical trench cross section.

[As added at: 22 IR 3087.]

327 IAC 3-6-6 ------- Technical standards for sanitary collection systems: required easements; other permits

(a) All easements for collection system rights-of-way must prohibit the construction of any permanent structure over the sanitary sewer and must also provide enough access for maintenance with mechanical equipment.

(b) All required permits or exemptions from other federal, state, and local units must be obtained prior to the commencement of construction of any sanitary sewer covered by this rule.

[As added at: 22 IR 3088.]

327 IAC 3-6-7 ------- Technical standards for sanitary collection systems: issuance requirements for sanitary sewer construction permits

The application for any construction permit required by this article shall be denied unless the applicant submits evidence of the following:

(1) The peak daily flow rate, in accordance with section 11 of this rule generated in the area that will be collected by the project system, will not cause overflowing or bypassing in the collection system from locations other than NPDES authorized discharge points.

(2) Sufficient capacity exists in the receiving water pollution treatment/control facility to treat the additional daily flow.

(3) The receiving water pollution treatment/control facility will remain in compliance with applicable NPDES permit effluent limitations.

(4) The sanitary sewer or collection system that is the subject of the construction permit application is to connect to a water treatment/control facility that has been completed and put into operation.

(5) The proposed collection system does not include new combined sewers or a combined sewer extension to existing combined sewers.

[As added at: 22 IR 3088.]

327 IAC 3-6-8 ------- Technical standards for sanitary collection systems: sanitary sewer materials

(a) All piping, accessories, and other materials in a sanitary sewer shall conform to the following applicable standards:

(1) For ductile-iron and fittings, the following standards apply:

(A) American National Standard C104/A21.4-95 for Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.

(B) American National Standard C105/A21.5-93 for Polyethylene Encasement for Ductile-Iron Pipe Systems.

(C) American National Standard C110/A21.10-93 for Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In. (75 mm through 1,200 mm), for Water and Other Liquids.

(D) American National Standard C111/A21.50-90 for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.

(E) American National Standard C115/A21.15-94 for Flanged Ductile-Iron Pipe or Gray-Iron Threaded Flanges.

(F) American National Standard C150/A21.50-91 for the Thickness Design of Ductile-Iron Pipe.

(G) American National Standard C151/A21.51-91 for Ductile-Iron Pipe, Centrifugally Cast, for Water or Other Liquids.

(H) American National Standard C153/A-21.53-94 for Ductile-Iron Compact Fittings, 3 In. through 24 In. (76 mm through 610 mm) and 54 In. through 64 In. (1,400 mm through 1,600 mm), for Water Service.

(2) For clay pipe used in gravity sewers, the Vitrified Clay Pipe (VCP) Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated, ASTM C700-96 shall apply.

(3) For concrete pipe used in gravity sewers, the following standards apply:

(A) Concrete Pipe (CP), ASTM C14-95, Standard Specification for Concrete Sewer, Storm Drain, and Culvert Pipe.

(B) Reinforced Concrete Pipe (RCP), ASTM C76-95a, Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

(4) For asbestos-cement pipe, the following standards apply:

(A) AWWA C400-93 Standard for Asbestos-Cement Pressure Pipe, 4 In. through 16 In. (100 mm through 400 mm), for Water Distribution Systems.

(B) AWWA C401-93 Standard for the Selection of Asbestos-Cement Pressure Pipe, 4 In. through 16 In. (100 mm through 400 mm), for Water Distribution Systems.

(C) AWWA C402-89 Standard for Asbestos-Cement Transmission Pipe, 18 In. through 42 In. (450 mm through 1,050 mm), for Potable Water and Other Liquids.

(D) AWWA C403-89 Standard for the Selection of Asbestos-Cement Transmission and Feeder Main Pipe, Sizes 18 In. through 42 In. (450 mm through 1,050 mm).

(5) For plastic pipe used in gravity sewers, the following standards apply:

(A) ASTM D1785-96b, Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.

(B) ASTM D2680-95a, Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly Vinyl Chloride (PVC) Composite Sewer Piping.

(C) ASTM D3034-97, Standard Specification for Type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings.

(D) ASTM F679-95, Standard Specification for Poly Vinyl Chloride (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.

(E) ASTM F794-97, Standard Specification for Poly Vinyl Chloride (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.

(F) ASTM F894-95, Standard Specification for Polyethylene (PE) Large Diameter Profile Wall Sewer and Drain Pipe.

(G) ASTM F949-96a, Standard Specification for Poly Vinyl Chloride (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings.

(H) AWWA C900-89 Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. through 12 In. for Water Distribution (includes addendum C900a-92).

(I) AWWA C905-88 Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14 In. through 36 In.

(6) For plastic pipe used in force mains, the following standards apply:

(A) ASTM D2241-96b, Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe, (SDR21, greater than 4 inch diameter).

(B) ASTM D2241-96b, Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe, (SDR26, less than 4 inch diameter).

(C) ASTM F714-97, Standard Specification for Polyethylene (PE) Plastic Pipe (SDR 21) Based on Outside Diameter.

(D) AWWA C900-89, Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. through 12 In. for Water Distribution (includes addendum C900a-92).

(E) AWWA C905-88, Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14 In. through 36 In.

(b) Piping and accessories previously used exclusively for sanitary sewers or water mains may be reused if:

(1) the piping or accessories comply with the requirements of subsection (a); and

(2) the piping or accessories have been restored to their original condition.

(c) All connections between pipes shall have mechanical joints or slip-on joints with rubber gaskets with the exception of polyethylene (PE) pipes that may be thermojointed by a person who is a manufacturer's certified thermojointer.

(d) Sanitary sewers constructed with polyvinyl chloride (PVC) and installed under existing or proposed roadways and railroads shall be cased in conformance with AWWA Standard C900-89, Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. through 12 In. for Water Distribution, Appendix A, or AWWA Standard C905-88, Standard for Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14 In. through 36 In., Appendix A.

(e) Sanitary sewers that are cased shall conform to AWWA Standard C600-93, Section 6, Standard for Installation of DuctileIron Water Mains and Their Appurtenances.

(f) Force mains shall be identified as such when using water main materials.

(g) The minimum diameter of sanitary sewers shall be sized so that the peak daily flow, in accordance with section 11 of this rule, that will be collected from the proposed collection system that is the subject of the application, plans, and specifications:

(1) will not cause overflowing or bypassing in the same subject proposed collection system from locations other than NPDES authorized discharge points; and

(2) will be in accordance with the following:

(A) Gravity sewers shall not be less than eight (8) inches in diameter.

(B) Force mains shall not be less than four (4) inches in diameter.

[As added at: 22 IR 3088.]

327 IAC 3-6-9 ------- Technical standards for sanitary collection systems: separation of collection systems from water mains and drinking water wells

(a) Sanitary sewers shall not be located within ten (10) feet of any existing or proposed water mains, when measured horizontally from the outside edge of the sanitary sewer to the outside edge of any existing and proposed water mains, unless the sanitary sewers and the water main comply with the following:

(1) The sanitary sewer and water main must cross with the sanitary sewer and water main separated by a minimum of eighteen (18) inches measured vertically from the outside edge of the sanitary sewer to the outside edge of the water main.

(2) The crossing specified in subdivision (1) must be at a minimum angle of forty-five (45) degrees measured from the center lines of the sanitary sewer and water main.

(3) The conditions specified in subdivisions (1) and (2) must be maintained for a minimum distance of ten (10) feet from either side of the sanitary sewer as measured from the outside edge of the sanitary sewer to the outside edge of the water main.

(b) A shorter separation distance than that specified in subsection (a) is allowed if the following is conducted within the separation distances specified in subsection (a):

(1) The sanitary sewers meet all water main pressure testing requirements as described in 327 IAC 8-3.2-17(a).

(2) The sanitary sewer shall be constructed of materials in conformance with one (1) of the following:

(A) 327 IAC 8-3.2-8.

(B) Section 8(a)(1) of this rule.

(C) ASTM D2241-96b, Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe, and having a SDR (standard dimension ratio) of 21.

(3) The sanitary sewers and water mains are not in contact.

(4) Any sanitary sewer joints are a compression type joint that are placed equidistantly from the water main.

(5) The sanitary sewer and water main are laid on separate trench shelves.

(c) No sanitary sewer manhole shall be within eight (8) feet of a water main as measured from the outside edge of the sanitary sewer manhole to the outside edge of the water main.

(d) Sanitary sewers shall not be within the isolation area of a public water system drinking water well unless in accordance with the following:

(1) The sanitary sewers meet all water main pressure testing requirements as described in 327 IAC 8-3.2-17(a).

(2) The sanitary sewer shall be constructed of materials in conformance with one (1) of the following:

(A) 327 IAC 8-3.2-8.

(B) Section 8(a)(1) of this rule.

(C) ASTM D2241-96b, Standard Specification for Poly Vinyl Chloride (PVC) Pressure-Rated Pipe, and having a SDR ratio of 21.

(3) The sanitary sewers are no closer than fifty (50) feet from the public water system drinking water well as measured from the outside edge of the sanitary sewer to the outside edge of the well casing.

(e) Sanitary lift stations shall not be located within ten (10) feet measured horizontally from the outside edge of the lift station to the outside edge of any existing and proposed water mains.

(f) The following shall not be located within the isolation area of a public water system drinking water well:

(1) Sanitary lift stations.

(2) Sanitary sewer manholes.

[As added at: 22 IR 3089.]

327 IAC 3-6-10 ------ Technical standards for sanitary collection systems: collection systems near surface water bodies

(a) Sanitary sewers and lift stations shall be separated from existing or proposed water bodies by ten (10) feet horizontally measured from the outside edge of the sanitary sewer to the edge of the water line at normal pool elevation.

(b) Sanitary sewers located above surface water bodies shall be in accordance with the following:

(1) Supported and anchored at each joint.

(2) Protected from damage and freezing with any of the following:

(A) Insulation.

(B) Increased slope.

(3) Accessible for repair or replacement.

(c) Sanitary sewers located under surface water bodies shall be constructed with ductile iron pipe or constructed of PVC having a SDR ratio of 21 and in conformance with ASTM D2241-96b, Standard Specification for Poly Vinyl Chloride (PVC) PressureRated Pipe, with mechanical joints rated to two hundred (200) pounds per square inch and backfilled with a stone, gravel, or coarse aggregate and covered in accordance with the following:

(1) Below the channel pavement if the channel is paved.

(2) Twelve (12) inches of cover shall be provided where the sewer is located in rock.

(3) Thirty-six (36) inches of cover shall be provided in all other areas.

(d) Sanitary sewers, other than inverted siphons in conformance with section 17 of this rule, that cross streams or rivers shall be in accordance with the following:

(1) Cross perpendicular to the stream flow.

(2) Have no change in grade.

(e) Sanitary lift stations shall be capable of remaining fully operational and accessible during a twenty-five (25) year flood.

(f) Sanitary lift stations, structures, and electrical and mechanical equipment shall be protected from physical damage potentially caused by a one hundred (100) year flood.

[As added at: 22 IR 3090.]

327 IAC 3-6-11 ------ Technical standards for sanitary collection systems: design flow rate requirements for collection systems and water pollution treatment/control facilities

(a) The flow rate requirements for collection systems and water pollution treatment/control facilities shall be in accordance with this section. The calculated average and peak flow rate values for a collection system and its associated water pollution treatment/control facilities shall be at least equal to the average and peak daily flow rate of the existing influent plus the flow from the proposed additional service connections calculated as follows:

(1) The flow rate requirements for the average daily flow rate for residential service connections may be determined by using a general average daily flow rate value. The following method shall be used to calculate average and peak flow rate values:

$$ADF = (General\ Avg) \times PRSC$$
$$PDF = ADF \times PF$$

Where:
- ADF = Average daily flow rate expressed as gallons per residential service connection per day.
- PDF = Peak daily flow rate expressed as gallons per residential service connection per day.
- General Avg = General average daily flow rate value in accordance in the following:
  - 200 gpd/unit for 1 bedroom apartment.
  - 300 gpd/unit for 2 bedroom apartment.
  - 310 gpd/unit for single-family homes.
- PRSC = Proposed number of residential service connections.
- PF = Peak daily factor of four (4).

(2) The flow rate requirements for the average and peak flow rate for service connections are described by Table 11-1 in subsection (b). The following method may be used to calculate the average and peak flow rate requirements:

$$ADF = FCF \times PSC$$
$$PDF = ADF \times PF$$

Where: ADF = Average daily flow rate expressed as gallons per service connection per day.
PDF = Peak daily flow rate expressed as gallons per service connection per day.
FCF = Flow calculation factors as contained in Table 11-1 in subsection (b).
PSC = Proposed number of service connections.
PF = Peak daily factor of four (4).

(3) If the average and peak daily flow cannot be determined or calculated using the methods described in subdivision (1) or (2), the determination of the average and peak daily flow shall be presented and approved pursuant to section 32 of this rule.

(b) The following flow calculation factors shall be used in the calculations under subsection(a)(2):

Table 11-1
Flow Calculation Factors (FCF)

Service Connection Description	FCF (gallons per day)
Agricultural labor camp	50 per occupant
Airport	3 per passenger plus 20 per employee
Assembly hall	3 per seat
Athletic field (baseball, soccer, football, etc.)	1 per participant and spectator with additions for concessions
Auction and flea market: with full kitchen	5 per customer
Auction and flea market: with warming kitchen	4 per customer
Auction and flea market: without kitchen	3 per customer
Automatic self-cleaning bathroom	20 per cycle (3 per day)
Banquet caterer	10 per person
Bar (without food)	10 per seat
Beauty salon: perm or color changes	35 per customer
Beauty salon: cut with wash	10 per customer
Beauty salon: cut without wash	5 per person
Bed and breakfast	150 per bedroom
Bowling alley (with bar and/or food)	125 per lane
Bowling alley (without food)	75 per lane
Bus station	3 per passenger
Campground (organizational) with flush toilets, showers, central kitchen	40 per camper
Campground (organizational) without flush toilets, privy use, central dining hall, no showers, handwashing	20 per camper
Campground (recreational) with individual sewer connection	100 per campsite
Campground (recreational) without individual sewer connection	50 per campsite
Church with full kitchen	5 per sanctuary seat
Church with warming kitchen	4 per sanctuary seat
Church without kitchen	3 per sanctuary seat
Condominium, multi-family dwelling: one bedroom	200 per unit
Condominium, multi-family dwelling: two bedroom	300 per unit
Condominium, multi-family dwelling: three bedroom	350 per unit
Condominium, one and two family dwelling	150 per bedroom
Conferences	10 per attendee
Correctional facilities	120 per inmate
Day care center	20 per person
Dentist	200 per chair plus 75 per employee

Table 11-1		
Doctor's office		75 per doctor, plus 75 per nurse, plus 20 per support staff
Factory with showers		35 per employee
Factory without showers		20 per employee
Fire station: manned		75 per firefighter
Fire station: unmanned		35 per firefighter
Food service operations: cocktail lounge or tavern		35 per seat
Food service operations: restaurant (not open 24 hours)		35 per seat
Food service operations: restaurant (open 24 hours)		50 per seat
Food service operations: restaurant (not open 24 hours but located along an interstate)		50 per seat
Food service operations: restaurant (open 24 hours and located along an interstate)		70 per seat
Food service operations: tavern		35 per seat
Food service operations: curb service (drive-in)		50 per car space
Golf comfort station		3 per 50% of maximum number of golfers
Golf main clubhouse		5 per golfer with additions for food service and showers
Hospital, medical facility		200 per bed
Hotel		100 per room
Kennels and vet clinics (sum of all of the following services at a facility):		
1)	a. cages;	5 per cage
	b. inside runs;	10 per run
	c. outside runs;	20 per run
	d. grooming;	10 per animal
	e. surgery; plus	50 per surgery room
2) staff		75 per veterinary doctor, plus 75 per veterinary assistant, plus 20 per support staff
Mental health facility		100 per patient
Mobile home park		200 per lot
Motel		100 per room
Nursing home		100 per bed
Office building without showers		20 per employee
Office building with showers		35 per employee
Outpatient surgical center		50 per patient
Picnic area		5 per visitor
Race tracks		5 per attendee, 20 per staff
School: elementary		15 per pupil
School: secondary		25 per pupil
School with dormitory		100 per bed
Service station: convenience store/service center		1,000 with additions for food preparation and seating
Service station with only two (2) restrooms		400 per restroom
Service station with only unisex restroom		600 per restroom
Service station: automatic self-cleaning bathroom		60 per day
Shopping center		0.1 per square foot of floor space, plus 20 per employee
Swimming pool bathhouse		10 per swimmer
Theater: drive-in		5 per car space
Theater: inside building		5 per seat

[As added at: 22 IR 3090.]

327 IAC 3-6-12 ------ Technical standards for sanitary collection systems: slope requirements for gravity sewers

(a) Gravity sewers, when flowing full, shall be designed and constructed with slopes that shall result in average flow velocities of not less than two (2) feet per second in accordance with the following:

Minimum Slopes

Pipe Diameter (inches)	Minimum Slope (percent)
8	0.40
10	0.28
12	0.22
14	0.17
15	0.15
16	0.14
18	0.12
21	0.10
24	0.08
27	0.067
30	0.058
33	0.052
36	0.046
39	0.041
42	0.037

(b) Oversized gravity sewers shall not be approved to justify using decreased slopes.

(c) The slope of a gravity sewer, between any two (2) manholes, shall be uniform across the distance from the outlet invert elevation of the upstream pipe and the inlet invert elevation of the downstream pipe.

(d) Gravity sewers shall be provided with anchors to protect against damage from impact and erosion in accordance with the following:

(1) Slopes greater than twenty percent (20%) shall be provided with anchors spaced no more than thirty-six (36) feet on center.

(2) Slopes greater than thirty-five percent (35%) shall be provided with anchors spaced no more than twenty-four (24) feet on center.

(3) Slopes greater than fifty percent (50%) shall be provided with anchors spaced no more than sixteen (16) feet on center.

[As added at: 22 IR 3092.]

327 IAC 3-6-13 ------ Technical standards for sanitary collection systems: force main requirements

In addition to the force main requirements specified throughout this rule, the following apply:

(1) Force mains shall be sized to provide a cleansing velocity of at least two (2) feet per second throughout the length of the sewer at the design pumping rate.

(2) Force main pipe and joint materials shall be equivalent to water main strength at design conditions.

(3) Air relief valves or other air relief devices shall be installed at every intermediate apex point where air may accumulate in the force main.

(4) Each air relief valve that exhausts above ground must be equipped with an exhaust pipe extending to a downward facing elbow covered with a corrosion-resistant, twenty-four (24) mesh screened opening at an elevation of eighteen (18) inches above ground level.

(5) Air relief valves shall be selected in accordance with the following:

(A) Automatic air relief valves shall not be used in areas:

(i) within the one hundred (100) year flood plain; or

(ii) where flooding may occur, such as in:

(AA) a pit;

(BB) a chamber; or

(CC) a manhole;

unless the automatic air relief valve is equipped with a downward facing exhaust pipe covered with a corrosionresistant, twenty-four (24) mesh screened opening at an elevation of eighteen (18) inches above the ground surface and above the one hundred (100) year flood elevation.

(B) Manually operated air relief valves shall be used in areas:

(i) within the one hundred (100) year flood plain; and

(ii) where flooding may occur, such as in:

(AA) a pit;

(BB) a chamber; or

(CC) a manhole.

(6) The following reaction devices installed to prevent movement in pipes and fittings, of any material type, shall be designed in conformance with Section 3.8 of AWWA Standard C600-93, AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances:

(A) Blocking.

(B) Tie rods.

(C) Joints.

[As added at: 22 IR 3093.]

327 IAC 3-6-14 ------ Technical standards for sanitary collection systems: changes in pipe size

A sanitary sewer pipe where joined with a larger diameter sewer pipe shall have the invert of the larger diameter pipe lowered to maintain the same energy gradient as the smaller pipe.

[As added at: 22 IR 3093.]

327 IAC 3-6-15 ------ Technical standards for sanitary collection systems: alignment requirements

A sanitary sewer, between any two (2) manholes, shall be laid with straight alignment from the outlet centerline of the upstream pipe and the inlet centerline of the downstream pipe.

[As added at: 22 IR 3093.]

327 IAC 3-6-16 ------ Technical standards for sanitary collection systems: manholes

(a) Manholes shall be constructed of:

(1) precast concrete that has lift holes; or

(2) poured-in-place concrete;

and shall have grade adjustment rings sealed with nonshrinking mortar in conformance with ASTM C478-96, Standard Specification for Precast Reinforced Concrete Manhole Sections.

(b) Inlet or outlet pipes shall be joined to the manhole with a gasketed, flexible and watertight connection.

(c) Manholes shall have a minimum diameter of forty-eight (48) inches and a minimum access diameter of twenty-two (22) inches.

(d) Watertight manhole covers shall be used in any area where the manhole tops are:

(1) subject to flooding by street run-off or high water;

(2) in a floodway; or

(3) in a floodplain.

(e) Manholes shall be located as follows:

(1) At all end points of sanitary sewers.

(2) Wherever changes occur in grade, size, or alignment of the sanitary sewer.

(3) At all intersections of sanitary sewers.

(4) With separation distances between any two (2) manholes not to be greater than the following:

(A) Four hundred (400) feet for sanitary sewers less than fifteen (15) inches in diameter.

(B) Five hundred (500) feet for sanitary sewers equal to or greater than fifteen (15) inches and less than thirty (30) inches in diameter.

(C) Six hundred (600) feet for sanitary sewers equal to or greater than thirty (30) inches in diameter.

(f) All upstream sanitary sewers less than twenty-four (24) inches from the manhole invert shall be filleted to prevent solids deposition. Drop pipes shall be provided for incoming sanitary sewers entering a manhole at an elevation of twenty-four (24) inches or more above the manhole invert and shall be in accordance with the following:

(1) Drop pipe connections on the inside of manholes shall be secured to the interior wall of the manhole and provide access for cleaning.

(2) Drop pipe connections on the outside of manholes shall be encased in concrete.

(g) A flow channel that conforms to the shape of the connecting sanitary sewer shall be made through the bottom surface of the manhole. The channel walls shall be formed or shaped to the full height of the crown of the outlet sewer.

(h) A bench shall:

(1) be provided on each side of any flow channel if the pipe diameter is less than the manhole diameter;

(2) have a surface slope of no less than four percent (4%); and

(3) receive no discharge onto the surface of the bench from a:

(A) lateral;

(B) service connection; or

(C) drop manhole pipe.

(i) The inlet to a manhole from a force main shall enter the manhole at an elevation less than twenty-four (24) inches above the flow line of the receiving manhole.

(j) Manholes shall be air tested in accordance with ASTM C1244-93, Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.

[As added at: 22 IR 3093.]

327 IAC 3-6-17 ------ Technical standards for sanitary collection systems: inverted siphons

(a) Inverted siphons shall have:

(1) not less than two (2) barrels; and

(2) a minimum pipe size of six (6) inches in diameter.

(b) The minimum design velocity, at average flow, shall be three (3) feet per second measured at a point immediately preceding the outlet.

[As added at: 22 IR 3094.]

327 IAC 3-6-18 ------ Technical standards for sanitary collection systems: installation

(a) All gravity sewers, force mains, and the accessories to either shall be installed in accordance with the one of the following:

(1) ASTM C12-95, Standard Practice for Installing Vitrified Clay Pipe Lines.

(2) ASTM D2321-89, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.

(3) AWWA standard C600-93, AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.

(4) AWWA standard C602-89, AWWA Standard for Cement-Mortar Lining of Water Pipelines—4 In. (100 mm) and Larger—In Place.

(5) AWWA standard C603-90, AWWA Standard for Installation of Asbestos—Cement Pressure Pipe.

(6) AWWA standard C605-94, AWWA Standard for Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.

(7) AWWA standard C606-87, AWWA Standard for Grooved and Shouldered Joints.

(b) If an ASTM or AWWA standard as allowed by subsection (a) is not applicable for the particular installation, the manufacturer's recommended installation procedure shall be followed.

(c) Continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a height above the pipe capable to support and protect the pipe.

(d) All ledge rock, boulders, and stones unable to pass through an opening of two (2) inches that are found in the trench within four (4) inches of the outside edge of all sewer pipe shall be removed.

(e) Sanitary sewers shall be covered with at least thirty-six (36) inches of earthen cover measured from the top of pipe to the proposed finish grade.

(f) Bedding classes A, B, C, or crushed stone as described in ASTM C12-95, Standard Practice for Installing Vitrified Clay Pipe Lines, shall be used and compacted for all rigid pipe installation.

(g) Embedment materials for bedding, haunching, and initial backfill, Class I, II, or III as described in ASTM D2321-89, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications, shall be used and compacted for all flexible pipe installation.

(h) Final backfill shall:

(1) be placed in a manner that will not disturb the sanitary sewer pipe; and

(2) not consist of the following:

(A) Debris.

(B) Organic material.

(C) Frozen material.

(D) Unstable materials.

(E) Boulders or stones unable to pass through an opening of two (2) inches that are placed within two (2) feet of the sewer pipe as measured radially from the outside edge of the sewer.

[As added at: 22 IR 3094.]

327 IAC 3-6-19 ------ Technical standards for sanitary collection systems: deflection and leakage tests

(a) A deflection test shall be performed on each flexible pipe following the elapse of thirty (30) days after the placement of the final backfill.

(b) No pipe shall exceed a deflection of five percent (5%) or greater.

(c) The diameter of the rigid ball or mandrel used for a deflection test shall be no less than ninety-five percent (95%) of the base inside diameter of the pipe to be tested dependent on what is specified in the corresponding ASTM standard. The test shall not be performed with the aid of a mechanical pulling device.

(d) All gravity sewer pipe shall be tested using one (1) of the following leakage test types:

(1) A hydrostatic test shall be performed with a minimum of two (2) feet of positive head. The rate of exfiltration or infiltration shall not exceed two hundred (200) gallons per inch of pipe diameter per linear mile per day.

(2) An air test shall conform to one (1) of the following methods:

(A) ASTM C828-90, Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines, for clay pipe.

(B) ASTM C 924-89, Standard Practice for Testing Concrete Pipe Sewer Lines by Low-Pressure Air Test Method, for concrete pipe.

(C) ASTM F1417-92, Standard Test Method for Installation Acceptance of Plastic Gravity Sewer Lines Using Low-Pressure Air, for plastic pipe.

(e) All force mains shall be pressure and leak tested in accordance with one (1) of the following methods:

(1) AWWA standard C600-93, AWWA Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.

(2) AWWA standard C602-89, AWWA Standard for Cement-Mortar Lining of Water Pipelines-4 In. (100 mm) and Larger-In Place.

(3) AWWA standard C603-90, AWWA Standard for Installation of Asbestos—Cement Pressure Pipe.

(4) AWWA standard C605-94, AWWA Standard for Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.

(5) AWWA standard C606-87, AWWA Standard for Grooved and Shouldered Joints.

If an AWWA standard is not available for the particular installation, the installation procedure recommended by the manufacturer shall be followed.

[As added at: 22 IR 3095.]

327 IAC 3-6-20 ------ Technical standards for sanitary collection systems: excavation water; pressure test water

(a) All water entering a sanitary sewer project excavation, prior to construction completion, shall be removed.

(b) All excavation water or pressure test water shall be disposed in one (1) of the following manners:

(1) Disposal to a sanitary sewer only after receiving the approval of the local sewer authority.

(2) Disposal to a location other than a sanitary sewer in accordance with state and federal laws and regulations.

[As added at: 22 IR 3095.]

327 IAC 3-6-21 ------ Technical standards for sanitary collection systems: lift station valve requirements

(a) Lift stations shall be provided with shutoff valves and check valves that are operable from the floor level.

(b) Shutoff valves and check valves shall be in accordance with the following:

(1) Shutoff valves shall be placed on the suction line of dry pit pumps.

(2) Shutoff valves and check valves shall be placed on the discharge line of each pump that is not a screw pump.

(3) The check valve shall be:

(A) located between the shutoff valve and the pump;

(B) suitable for the material being handled;

(C) placed on the horizontal portion of the discharge piping except for ball check valves; and

(D) rated for the normal pressure and water hammer.

[As added at: 22 IR 3096.]

327 IAC 3-6-22 ------ Technical standards for sanitary collection systems: ventilation

(a) Ventilation shall be provided for all pump stations.

(b) No interconnection of ventilation systems shall exist between wet wells and dry wells.

(c) All intermittently operated ventilation equipment shall be electrically interconnected with the respective lift station lighting systems.

(d) All manual ventilation and lighting switches shall override any automatic controls.

(e) All fan wheels shall be fabricated from nonsparking material.

(f) Dry wells that are located underground shall be provided with mechanical ventilation in accordance with the following:

(1) Continuous ventilation that provides at least six (6) complete air changes per hour.

(2) Intermittent ventilation that provides at least thirty (30) complete air changes per hour.

(3) A combined ventilation consisting of ten (10) minutes of ventilation at a rate of thirty (30) complete air changes per hour followed by an automatic switch to six (6) complete air changes per hour may be used to conserve heat.

(g) Wet wells with screens or mechanical equipment shall be equipped with permanently installed mechanical ventilation in accordance with the following:

(1) Continuous ventilation that provides at least twelve (12) complete air changes per hour.

(2) Intermittent ventilation that provides at least thirty (30) complete air changes per hour.

(h) All pulleys and belts shall be of a static electricity dissipating type.

[As added at: 22 IR 3096.]

327 IAC 3-6-23 ------ Technical standards for sanitary collection systems: lift station pumps

(a) Multiple pumps shall be provided in each lift station. If no more than two (2) units are provided in a lift station, each pump shall be rated for the capacity that is capable of pumping the design peak hourly flow.

(b) Lift station pumps shall be in accordance with the following:

(1) Capable of passing spheres at least three (3) inches in diameter.

(2) Have lift station pump suction and discharge openings at least four (4) inches in diameter.

(3) Positioned at an elevation to allow operation with a positive head under normal operating conditions, with the exception of suction-lift pump stations.

(4) Have individual intakes.

(5) Have a design capacity based on peak hourly flow.

(c) Electrical switching equipment shall be installed at lift stations to automatically alternate the pumps in use.

(d) Dry wells shall be equipped with sump pump equipment having:

(1) dual check valves to remove leakage or drainage into the dry well; and

(2) a capacity rating able to remove the maximum pump seal water discharge.

[As added at: 22 IR 3096.]

327 IAC 3-6-24 ------ Technical standards for sanitary collection systems: electrical requirements

The National Electrical Code requirements for Class I, Group D, Division 1 locations shall govern electrical systems and components used in wet wells or in enclosed or partially enclosed areas where concentrations of flammable gases or vapors may be present. The components may include such equipment as motors, lights, cables, conduits, switch boxes, and control circuits, and all shall comply with the following:

(1) Be protected against corrosive conditions.

(2) Each flexible cable shall be provided with a watertight seal and separate strain relief.

(3) The main power feed to all lift stations shall be equipped with a fused disconnect switch located aboveground.

(4) The equipment, if not housed, shall meet the requirements of NEMA 3R or 4.

[As added at: 22 IR 3096.]

327 IAC 3-6-25 ------ Technical standards for sanitary collection systems: safety requirements

Each lift station shall be provided with an audible and visual alarm system that gives an alert for the following problems:

(1) Power failure.

(2) Sump pump failure.

(3) Pump failure.

(4) Unauthorized entry.

(5) Any pump station malfunction.

[As added at: 22 IR 3097.]

327 IAC 3-6-26 ------ Technical standards for sanitary collection systems: dry wells

Dry wells shall be provided with automatic heating and dehumidification equipment.

[As added at: 22 IR 3097.]

327 IAC 3-6-27 ------ Technical standards for sanitary collection systems: wet wells

(a) The effective volume of a wet well shall not be greater than the volume created by the average daily flow in thirty (30) minutes.

(b) The floor of a wet well shall have a minimum slope of forty-five (45) degrees to a hopper bottom.

(c) A wet well that is covered shall be vented to allow for the displacement of air due to the filling of the wet well.

[As added at: 22 IR 3097.]

327 IAC 3-6-28 ------ Technical standards for sanitary collection systems: suction-lift type lift stations

(a) In addition to the requirements for lift stations described throughout this rule, suction-lift stations shall have one (1) of the following type pumps that are in accordance with the associated requisite conditions:

(1) Self priming pumps shall:

(A) be capable of rapid priming and repriming at the lead pump on elevation;

(B) be capable of self-priming and repriming automatically under design operating conditions;

(C) have suction piping that shall not exceed twenty-five (25) feet in length;

(D) be capable of maintaining priming lift at the lead pump on elevation that shall include a safety factor of at least four (4) feet from the maximum allowable priming lift for the specific equipment at design operating conditions; and

(E) be capable of maintaining a combined total of the dynamic suction lift at the pump off elevation and the required net positive suction head at design operating conditions that shall not exceed twenty-two (22) feet.

(2) Vacuum priming pumps shall:

(A) be equipped with dual vacuum pumps capable of automatically and completely removing air from the suctionlift pump; and

(B) be capable of maintaining a combined total of the dynamic suction lift at the pump off elevation and the required net positive suction head at design operating conditions that shall not exceed twenty-two (22) feet.

(b) The pump equipment compartment for all pump types of subsection (a) shall be located above grade or separate from the wet well. Wet well access shall be at least twenty-four (24) inches in diameter but shall not be through the pump equipment compartment. Valving shall not be located in the wet well.

[As added at: 22 IR 3097.]

327 IAC 3-6-29 ------ Technical standards for sanitary collection systems: submersible type lift stations

Submersible type lift stations shall meet the requirements for lift stations described throughout this rule, except as modified in accordance with the following:

(1) Submersible pumps and motors shall be:

(A) rated for use with wastewater;

(B) in accordance with the specialized requirements of the National Electric Code; and

(C) provided with a method of detecting shaft seal failure or potential seal failure on each pump and motor.

(2) Submersible pumps shall be provided with means to be replaced without dewatering of the wet well or disconnecting any piping in the wet well.

(3) Electrical supply, motor and pump control, and alarm circuits shall be:

(A) accessible from outside the wet well for disconnection; and

(B) protected from exposure in accordance with the specialized requirements of the National Electric Code.

(4) Valves required in section 21 of this rule shall be located in a separate valve pit.

(5) The valve pit of subdivision (4) shall be equipped:

(A) with a method of dewatering; and

(B) with a drain line having a gas and water tight valve if the valve pit is to be dewatered.

(6) Check valves that are integral to the pump need not be placed in the valve pit.

[As added at: 22 IR 3097.]

327 IAC 3-6-30 ------ Technical standards for sanitary collection systems: emergency operation

A lift station shall be provided with the equipment necessary for the provision of one (1) of the following:

(1) Dual power feeds.

(2) Standby generators.

(3) Standby pumps.

[As added at: 22 IR 3098.]

327 IAC 3-6-31 ------ Technical standards for sanitary collection systems: cross connection control

There shall be no physical connection from a public or private potable water system to a sanitary collection system, or any structure related to such a system, that would permit the passage of any wastewater or polluted water into the potable supply.

[As added at: 22 IR 3098.]

327 IAC 3-6-32 ------ Technical standards for sanitary collection systems: technical standard alternative demonstration

(a) An alternative to technical standards required by this rule may be approved by the commissioner for either a single application or for system-wide applications if the applicant demonstrates in a written submission that the alternative will achieve the following:

(1) Meet the issuance requirements of section 7 of this rule.

(2) Provide at least the same level of protection that the technical standards of this rule would provide.

(b) An approved alternative to a technical standard shall be in effect for one (1) year from the commissioner's approval of that alternative standard.

(c) An alternative to a technical standard shall only apply to the application or the system for which the alternative is requested.

[As added at: 22 IR 3098.]